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NPIC/TSG/RED/SDB-047-70  
6 October 1970

MEMORANDUM FOR: Chief, Engineering Support Division, TSG

ATTENTION : Chief, Technical Evaluation Branch, ESD/TSG

THROUGH : Chief, Research & Engineering Division, TSG

SUBJECT : T&E Report No. 70-10 on the [ ] 2X Objective for the  
Zoom 240R Stereoscope System in Monoscopic Mode

25X1

1. This is a good, objective report. The format of detailed requirements, results, and procedure makes for ease of reading and understanding. The progression from Introduction, Summary of Results, etc., is good.

2. Some specific comments follow:

a. The Abstract states "...that the device is suitable for procurement subject to modification." Paragraph 3.1 concludes that "The device is considered to be acceptable to NPIC for procurement in its present condition and configuration." Perhaps rephrasing would remove this apparent contradiction.

b. Paragraph 3.2 (b). [ ] advises that the lenses are coated.

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c. Paragraph 2.1.2 reports that "The 2X Objective is not parfocal..." The 240 system is far from parfocal within itself. 1X mono vs. 2X stereo is parfocal, 1X mono vs. 0.5X mono is not parfocal by 3 3/8 inches. Probably the important point of this statement is that the 2X Objective lens is parfocal with the 2X stereo mode. Also, can you realistically visibly determine the point of best focus to 0.001 inch? As a guess, depth of focus for the system is perhaps at least three times this much.

d. Paragraph 5.1.1 (e). The meaning is not clear. Arm separation is determined by rotating the arms. The statement says that the arms are restricted in rotation, yet minimum and maximum separation does not change.

Declass Review by  
NIMA/DOD

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Excluded from automatic  
downgrading and  
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SUBJECT: T&E Report No. 70-10 on the [ ] 2X Objective for the Zoom 240R Stereoscope System in Monoscopic Mode.

e. Paragraph 5.1.2 states that "It is desirable that the 2X Objective be parfocal with the Zoom 240R Stereoscope System." This is not possible since the 240 system is not parfocal within itself. Again, the important point probably is that 2X Objective and 2X stereo is parfocal. Indeed, any reporting of parfocality is a reporting of the pod/lens system and not a reporting of the 2X Objective itself.

f. Paragraphs 5.2.2 and 5.3.2 (d) These paragraphs raise the question as to whether the system would remain in focus when using a cover glass.

g. Paragraph 5.3.2 (e) reports a resolving power of eight lines/mm/power, whereas Paragraph 5.2.5 reports approximately five lines/mm/power.

[ ]  
SDB/RED/TSG/NPIC

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Distribution:

Original - Addressee

1 - SDB/RED/TSG/NPIC

1 - Project Monitor

NPIC/TSG/RED/SDB [ ]

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